AMENDMENT OF THE CLAIMS

Claim 1. (currently amended) A preservation solution for organs and tissues or parts thereof from humans and animals containing endothelium, comprising:

calcium ion,

at least one colloidosmotically active substance, and

nitroglycerin;

wherein the nitroglycerin is present in an amount of about 10^{-4} - 10^{-7} M and the calcium ion is present in an amount of about 0.3 - 1.5 mM based on the final volume of the preservation solution.

Claims 2-3. (cancelled)

Claim 5. (previously amended) A preservation solution for organs and tissues or parts thereof from humans and animals containing endothelium, comprising:

calcium ion,

nitroglycerin,

about 1-15% by weight low-molecular dextran having an average molecular weight of about 1,000 daltons,

about 3-8% by weight high-molecular dextran having an average molecular weight of 40,000 - 120,000 daltons as a colloidosmotically active substance,

about 0.1 - 2.6% glucose as a substrate,

buffer,

about 4-25 mM potassium ions,

about 1-16 mM magnesium ions,

about 50-150 mM sodium ions, and

about 50-150 mM chloride ions,

wherein the amounts are based on the final volume of the improved preservation solution.

Claim 6. (currently amended) ~~The improved preservation solution according to claim 1~~, A preservation solution for organs and tissues or parts thereof from humans and animals containing endothelium, comprising:

calcium ion,

at least one colloidosmotically active substance, and

nitroglycerin,

wherein said solution comprises 50 g/l dextran 40 having a molecular weight of about 40,000 daltons as said colloidosmotically active substance, 5 mM glucose as substrate, 0.8 mM phosphate buffer, 6 mM potassium ions, 0.8 mM magnesium ions, 138 mM sodium ions, 142 mM chlorine ions and 0.8 mM sulphate ions, and 0.24 ml THAM buffer, based on the final volume of the improved preservation solution.

Claim 7. (original) The improved preservation solution according to claim 5, wherein the concentration of potassium ions is about 16-25 mM, and the concentration of magnesium ions is about 12-16 mM, based on the final volume of the improved preservation solution.

Claims 8-23. (cancelled)

Claim 24. (currently amended) A method for preserving organs and tissues or parts thereof from humans and animals, comprising:

flushing an organ or a tissue with, and immersing in, the improved preservation solution according to claim 5, and

storing said solution containing said organ or tissue at a temperature of 0.5-12°C, ~~preferably 2-8°C,~~ for at most 36 hours for long-term preservation, or at a temperature of about 4-24°C for at most 2 hours for short-term preservation.

Claim 25. (previously added) The method of preserving organs and tissues or parts thereof from humans or animals according to claim 24, wherein said tissue comprises blood vessels or parts there-of.

Claim 26. (previously amended) The method of preserving organs and tissues or parts thereof from humans or animals according to claim 24, wherein said tissue is vena saphena magna or parts thereof.

Claim 27. (previously added) The method of preserving organs and tissues or parts thereof from humans or animals according to claim 24, wherein said organs and tissues comprise lungs.

Claim 28. (previously added) A method of preserving endothelium-dependent relaxation factor function in organs, tissues and parts thereof, comprising storing said organs, tissues and parts thereof in the improved preservation solution according to claim 5.

Claim 29. (previously added) A method of preserving contractile function in contractile tissue, comprising storing the contractile tissue in the improved preservation solution according to claim 5.

Claim 30. (currently amended) A method of preserving contractile function in contractile tissue, comprising storing the contractile tissue in the preservation solution according to claim 5, wherein:

nitroglycerin is present in an amount of about 10^{-4} - 10^{-7} M; and

calcium ion is present in an amount of about 0.3 - 1.5 mM ~~calcium~~, based on the final volume of preservation solution.

Claim 31. (previously amended) A method for maintaining the integrity of vascular endothelium, comprising:

placing said organs, tissues and parts thereof into the preservation solution according to claim 5.

Claim 32. (currently amended) A method for preserving vascular endothelium, comprising:

storing a contractile tissue in the preservation solution according to claim 5,

wherein nitroglycerin is present in an amount of about 10^{-4} - 10^{-7} M; and calcium ion is present in an amount of about 0.3 - 1.5 mM ~~calcium~~, based on the final volume of preservation solution.

Claim 33. (previously amended) A method for preserving organs and tissues or parts thereof from humans and animals, comprising:

flushing an organ or a tissue with the improved preservation solution according to claim 1,

immersing the organ or the tissue in the improved preservation solution, and

storing the improved preservation solution containing the organ or the tissue for 36 hours or more at 0.5-12°C.

Claim 34. (previously amended) A method for preserving organs and tissues or parts thereof from humans and animals, comprising:

flushing an organ or a tissue with the improved preservation solution according to claim 5,

immersing the organ or the tissue in the improved preservation solution, and

storing the improved preservation solution containing the organ or the tissue for 36 hours or more at 0.5-12°C.

Claim 35. (new) A method for preserving organs and tissues or parts thereof from humans and animals, comprising:

flushing an organ or a tissue with, and immersing in, the improved preservation solution according to claim 5, and

storing said solution containing said organ or tissue at a temperature of 2-8°C, for at most 36 hours for long-term preservation, or at a temperature of about 4-24°C for at most 2 hours for short-term preservation.